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On Important Apian Subjects.

Tacks or Small Nails for Spacing Frames.

BY CHAS. A. F. DOERR.

On page 317, I see an article about spacing-tacks. Let me tell how I use spacing-tacks, and used them with satisfaction more than 10 years ago in Germany.

I use the Gallup frame ($11\frac{1}{4} \times 11\frac{1}{4}$ inches outside measure), which I make myself of common laths, one inch wide. In each frame 4 spacing-tacks (wire nails, thin, one inch long, with very small heads) are driven about an inch from the ends



Fig. 1.

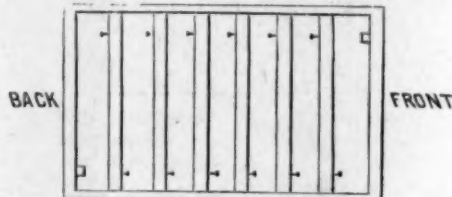


Fig. 2.

of the top and bottom bars. The tacks stand out $\frac{3}{4}$ of an inch, so the frames are apart $1\frac{1}{4}$ inches from center to center. They are arranged as in Fig. 1, the left being the top-bar, and the right the bottom-bar.

The top and bottom bars take each 2 spacing-tacks—the top-bar one on the right on the front side, and one on the left on the rear side. In the bottom-bar the tacks are arranged the other way, viz.: one on the left on the front side, and one on the right on the rear side. You see, this arrangement remains the same, if you turn the frame front to back, or back to front.

In order to space the first and last frames accurately, the front and back walls of the hive have each two little cleats ($\frac{3}{4}$ of an inch thick, and about $1\frac{1}{4}$ inches long) nailed to them. On the front wall they are arranged thus: Above on the left, and below on the right hand side. On the back wall reversely—above on the right, and below on the left side. The upper ends of these cleats above are even with the upper surfaces of the top-bars of the frames, and the lower ends of the cleats below are on a level with the under surfaces of the bottom-bars. If you remove the cover of the hive and every other frame out of it, the top view will look like Fig. 2.

As I said above, I use for spacing-tacks thin wire nails, one inch long, with very small heads. The reason is that they might not interfere very much with the wire basket of the extractor.

I have no trouble with brace-combs.

One thing that, against this method of self-spacing of the frames is, one must be careful in taking out one of the inner frames, or the nail will cut through the adjacent combs. But if you leave a little play behind the last frame, and move all the frames a little backwards until you come to the one you intend to take out, it can be done without injuring the frames next to it.

Maywood, Ill.

How Shall We Increase Our Bee-Pasturage?

Read at the Bee-Keepers' Educational Society of Rhode Island

BY DR. MACKEY.

I think the greatest need of the bee-keeper in this locality, or at least about Attleboro, is an improvement in bee-pasturage; and an important question for us to discuss at this time is, How shall we increase it? That all may have an opportunity to ventilate their ideas and tell of their localities' needs, I am prompted to select this subject.

I think we as individuals, as well as bee-keepers, can do much to encourage the farmer to cultivate those plants that furnish a large supply of nectar. Our voices should be raised to encourage the farmer to raise buckwheat—a plant that will bear all kinds of abuse, and will flourish on the poorest land, but will respond profitably to thorough cultivation and manuring. Some years ago I sowed it quite liberally to clear land of objectionable plants or weeds, to be plowed in as a green manure, and this followed by winter rye, and this again plowed in, in the late spring, placed the soil in a condition to raise a heavy crop of corn, with the aid of ground bones and wood ashes in the fall, leaving the field in a state of tillage prepared to successfully grow any crop.

Since the introduction of the Japanese variety of buckwheat, many waste, or nearly barren, fields might be cultivated profitably, not only for its grain, but the straw is useful as a litter, or bedding for cattle, or as a mulch. If all poultry-raisers were aware of its great value, and how improved the appearance of the plumage and general condition of all



varieties of fowl that fed upon it sparingly and continuously through the winter months, a much larger supply would be required, and a large increase in the acreage cultivated.

Another direction in which we could increase our honey-bearing plants is to encourage the use of wood ashes and ground bone applied as a fertilizer to wornout or exhausted pastures, and one who has never tried it will be surprised to

see how the more nutritious plants will supplant the wild weeds and grasses, and white clover is sure to come in in abundance, but would show itself much sooner if a little seed was scattered about. It is coming to be pretty generally accepted among the more advanced or intelligent farmers, that the order "Leguminosae," to which belong the clovers, beans, peas, etc., have the power of taking nitrogen from the atmosphere by its leaves, or from the soil through its roots, and converting it to its own use. With the far-reaching taproot of the clovers, to bring the mineral elements from the subsoil, they are recognized as the most economical means of returning many worn-out fields to their original fertility.

As we look about our farms, we find, comparatively speaking, a very small percentage of Alsike clover cultivated—certainly as much, if not more, valuable as a fodder-plant than the coarser red varieties, making a much finer hay, and, what I have seen of it, not losing its leaves in making, to such an extent as the red varieties, but as a honey-plant it takes its place next to white clover, being superior in every way to the red.

The scarlet or Italian clover is now coming into prominence as a bee-plant as well as a new fodder-plant, and the testimony of the majority is not yet entirely in its favor, as it is certainly not as hardy nor as robust as our common varieties, but in the South these qualities may recommend it. I grew it in 1870 as an ornamental plant, and also grew quite a plot as an experiment, comparing its value with other forage plants and grasses, but did not find it very attractive to the bees, and did not consider it at that time as of any value as a honey-plant, but we can form no opinion of the value, or otherwise, concerning any plant, of its honey-bearing qualities, without we can see it growing more than one season, as bee-keepers in all localities find that certain years their most important honey-plants fail to secrete or furnish nectar, although their blossoms are just as plentiful.

There are two varieties of clover—the *Trifolium agrarium* and the rabbit foot, *Trifolium arvensis*—that are of no value, as I have never seen a bee upon either of them, neither cattle nor hogs feeding upon them in a pasture.

It is becoming common in some localities to sow oats and Canada peas together, and the pea-blossoms are very attractive to the bees. There are also many plants which supply more or less honey, that we could encourage the growth of, by using a little effort in disseminating the seeds.

The sweet clover—mellilotus—will become readily naturalized by the roadsides and in waste-places, by scattering a few seeds in favorable localities as we pass by. It not only furnishes flowers, but a continuous supply much longer than the majority of plants. The mignonette and many of the mint family add to our variety of honey-bearing plants; also the giant spider flower, *Cleoma pungens*, and the Rocky Mountain bee-plant. *Cleoma integrifolia* could be easily introduced, the former becoming naturalized from the first, and reseeding itself, and, further, is greatly admired by many as an ornamental plant. These and a host of other honey-bearing plants useful for ornament would be largely grown if we would take pains to give the seed to our flower-loving friends.

Attleboro, Mass.



What Dr. Miller Thinks.

LICKING UP LEAKAGE.—The advantage of escapes mentioned by Mr. Dadant on page 357, namely, getting the bees to lick up the leakage caused by breaking apart burr-combs, is one not to be despised. It may not be generally known, however, that the same end may be reached more easily without the escape. Just pry up the super, honey-board, or whatever is over the burr-combs, and then let it instantly back in place. The bees will clean up the honey so the burr-combs will come off just as dry as though an escape had been used.

UNQUEENING.—Out of respect for Father Langstroth, who is, I believe, the originator of the word, I think we should say unqueen and not dequeen. Removing the queen at swarming-time, as mentioned by C. H. Chapman, page 368, has been practiced with more or less variation by a number of bee-keepers, especially in New York State, and it would be interesting if Mr. Elwood, or some one else, would tell us whether it is now practiced as much as formerly. I practiced it at one time quite extensively, but gave it up. I think others may have been more successful.

It is only fair to say to novices that one part of the program is very difficult of execution. Friend Chapman rightly puts emphasis on the word *every* each time he says "remove every queen-cell." Now that's one of the things I never could

be entirely sure of doing. I might think I was specially inefficient in that direction, but I am inclined to think the average bee-keeper would have the same difficulty, from the fact that my assistant with a very sharp pair of eyes also failed at times. It is not so very difficult to find the cells that had been started before swarming, or pre-constructed cells, but the post-constructed cells, or those started from larvae in worker-cells after the first cutting out, are sometimes so well hidden, or so slightly raised above the general surface of the comb, as to be very difficult of detection.

I wish Friend Chapman and others would tell us how many times, if any, they have failed to find *every* cell.

FOLLOWERS.—On page 362, Bee-Master objects to the use of followers on account of their awkwardness, but says the awkwardness may be owing to his stupidity. I don't believe it's his stupidity, but his not being used to it. I didn't believe in followers, but at one time I had to use followers for the sake of making the room for the frames a little smaller, and after once getting used to them I wouldn't like to be without them. But I must confess that I have hives with Hoffman frames in which the followers are a good deal worse than awkward. There is so little spare room that it is easier to get out a frame first than to take out the follower first. With the right amount of room it is easy to take out the follower, and when that is out there is no trouble about getting out the frames.

THAT MICHIGAN LAW.—I wish Bro. Hilton would tell us whether there is not some mistake about that law mentioned on page 364, making it a crime to have a colony of bees within 90 feet of the highway. Somehow it doesn't seem to tally with the intelligence of the Wolverines.

SMOKING BEES.—I hesitate to "talk back" to a veteran like Dr. Brown, but, Doctor, you use more smoke than I do before opening a hive. (See page 365). One puff at the entrance, and immediately I commence taking off the cover. But then I use more smoke at the next stage, for I don't wait to see whether the bees "show a desire to come up," but give them smoke on top just as soon as the cover is raised. I doubt if you mean that you wait a full minute of 60 seconds before giving the second smoke. Sometimes that would mean a whole hour in a day, which could hardly be afforded.

PIPING OF THE QUEEN.—"Done by the wings," says Dr. Brown, and perhaps that is the general teaching, but Cheshire says: "It is certain that the wings are not concerned in its production, since queens clipped so vigorously that not a vestige of wing remains can be as noisy as others." He thinks the stridulation is produced by the third and fourth abdominal plates.

TEMPER AND HEADACHE.—There goes Dr. Petro again with his inconsistencies. On page 370 he says temper causes headache, and then instead of advising to get rid of the temper, he says: "Keep your temper!" I hope my wife won't see what he says about hot water and soda curing the temper, for I don't like hot water and soda. Marengo, Ill.



Bees and Fruit-Bloom—Extracting Honey.

BY MRS. L. HARRISON.

Woman-like, I want to put in a word in answer to the question, "Do bees work on strawberry blossoms?" My observations, with reference to bees pollenizing strawberry and blackberry bloom, is confined to a small garden plot, and may not have much weight. I saw a bee in Florida last winter working upon the strawberry bloom, in a half-hearted sort of a way; and occasionally in Illinois I've seen them do the same thing. Now one bee-keeper may make the assertion that bees never work on strawberry bloom, basing his opinion upon his observations in his own locality; and another, in a distant part of this great land of ours, say that they do, and both be correct, as their observation goes. In a land where there is not sufficient frost to destroy insects, bloom is not so dependent upon honey-bees for pollenization, as where there is. A few years since the assertion was made, that bees never work upon corn. I've seen them work upon sweet-corn for days, gathering the sweet juice that exudes from the axils of the leaves. In northern Vermont, the tassels of corn yield much more pollen than in central Illinois.

When the golden-rod blooms in central Illinois the nights are usually hot, without dew, and no nectar is secreted; while

in the Green Mountains of Vermont, and white Mountains of New Hampshire, it yields largely, for the nights are cool and damp, which are the conditions necessary for its secretion.

We hear much said about orange-bloom honey, yet I heard a bee-keeper assert in Florida, that bees did not gather honey from the orange, and I've seen bees work very shyly upon peach-bloom. Will some of our Southern bee-keepers tell us whether bees gather surplus honey from orange groves? If they do, why does the seed of oranges and peaches produce trees that bear fruit like the original? During the War, a returning soldier brought home a half-bushel of peaches, and his wife planted the seed, which produced quite an orchard, and they all bore fruit alike, and the same as the original half-bushel. If bees carry pollen from bloom to bloom of the orange and peach, as they do in many other kinds of fruit, why does not the seed produce trees bearing different varieties of fruit?

EXTRACTING HONEY WITH HEAT.

The idea! Are we retrograding? Going back to the use of our "daddy's hive?" (See page 335.)

After many experiments, in melting honey, I've come to the conclusion that it cannot be done without imparting to it a waxy flavor. I've put it in a bright new tin pan, and placed it over a kettle of water, stirring it continually, and as soon as it was melted removed it, and yet with all the pains I could take, it would have a twang. Our grandmother's way was better: Put it in a sack and hang near the fire. It should not be called "extracted honey," either, for it will give a bad name to the true product.

Bees in this locality have gathered but little nectar since fruit-bloom. Part of the time it has been very cool, and now a severe drouth prevails, which shrivels the clover leaves.

Peoria, Ill.



Large and Small Hives—Some Big Bees.

BY C. DAVENPORT.

On page 360, Mr. Thompson makes some comments on my article on page 231. He says I argue the matter as if the man who preferred large to small hives would necessarily keep the same number of colonies in both cases. I have not, and do not argue any such thing. What I claim is, that I can, with a few very rare exceptions, get more surplus comb honey with a colony in a hive not larger than the 10-frame, than I can with the same colony in a larger one, no matter whether this colony, or any number of colonies, is located on a range that is over or under stocked.

Mr. T. also says the only statement I make which seems to give positive advantage to the small hives is: "With big hives, where no feeding is done, the season is often an entire failure." He then says: "But it is not unlikely that a considerable percentage (enough to account for the 'often') of the big hives referred to, contained colonies in the first or second year of their existence." That was not the case, Mr. T. If it had been, that article would not have been written the way it was. Continuing, he says: "Which were further embarrassed by being in an apiary of just as many colonies as would be needed for the locality if they were all in small hives."

Most of Mr. T.'s theories are too deep and complicated for me to understand. I thought, though, when I first read his comments on my article, I understood that part of it, but upon second reading I find this last of his that I have quoted may be interpreted to mean two, or perhaps more, different conditions. As I do not know what he meant, I can only say that the big hives referred to were in a yard where there were many times their number of small ones; their range was at all times heavily, perhaps, overstocked. Now, if under these conditions Mr. T. thinks the big hives were "embarrassed" so that they could not show their superiority, if they had had any, over small ones, he and I do not agree.

Let us suppose that Mr. T. is as good a man physically as he is mentally. It would then perhaps be natural to think that he could do a good deal more work than a common man could. Now say he and I, and 10 more ordinary men like myself, have a cornfield containing a large number of rows to hoe. If I, or none of the others, interfere with Mr. T. in any way while at work, when we get done if he has hoed only about two-thirds as many rows as each of the rest of us, would there be any reason for him to say that he could have done more in the same length of time if he had been alone, or that he could if there had been less men, but all good ones like himself? This is just what Mr. T. would ask us to believe, if he claims that the big hives referred to did not have a fair chance to show their superiority, if it had existed.

SOME BIG BEES THAT IMPROVED THEMSELVES.

I will describe those bees that I said in a former article would double discount the best I then had, although that did not express exactly what I meant.

One day, three years ago, early in the spring, when I was returning home from one of the out yards, an old gentleman, who lived on the way, asked me if I was the man that kept so many bees. When I told him I was, he said he had some bees that he would like to sell. He had rented his land, sold most of his stock, and was going to town to live. He did not wish to take the bees, but was unable to find anybody that would buy them. I had all the bees I wanted, but he finally offered to sell them all—9 colonies—for \$15, and haul them where I wanted them. I thought they were worth this, or more, so I bought them and had them hauled to the home yard.

The bees were in large box-hives that were about 13 inches square, and from 18 to 24 inches high, having been kept in such hives over 15 years. The bees themselves were very large. All of them had three, and some had four, light yellow bands. They were all powerful colonies, and the hives were heavy with honey, although they had been out-doors all winter. The owner always left them out without any protection whatever, and he did not remember ever losing a colony that had enough to eat.

Soon after I got them I transferred 5 of them to frame hives, and I was greatly surprised at the size of the queens. I thought I had some, and had seen, large queens before, but some of these were nearly one-half larger than any I had ever seen, and as large again as some I have bought. But I did not think they would be as good as some of my own stock, so I doubled up some weak colonies and superseded them with the extra queens thus obtained. The previous summer I had sent for a queen, and when she came she was about the size of any ordinary worker, but the man I bought her of insisted that it was a good-sized queen. I took one of the largest of these big queens and sent her to this breeder. I told him it was a queen, and what I called a fair-sized one.

The 4 colonies that were not transferred each swarmed two or three times in spite of the fact that the location of the hives was changed each time. I intended to rear queens from some of my best stock, and supersede all of these queens after the main flow, but I did not that first year, for the first swarms from those big box-hives gathered more honey than any other colonies in the yard, and counting what the after-swarms and the old colonies gathered, each of them would have secured as much again as the best of the others.

These queens were prolific, but not more so than others I have, and have had, but the workers lived longer, and a good deal longer than ordinary bees. They were also harder; they would often be busily at work when the weather was such that the others did not leave their hives. They capped their honey whiter than pure Italians, filled the sections much better, especially if only starters were used, and as a general thing they sealed all the outside cells.

But I have none of these bees now that are pure, or as pure as when I got them, for although they were by far the hardest and best honey-gatherers I ever had, they had some very undesirable qualities. In the first place they were hard bees to handle—were very vicious and vindictive. The bees of a colony that had been handled, even for a day or two afterwards, would go a long way out of their way in order to sting somebody, and a person that was stung by one of these bees remembered it for a long time. Contrary to the general rule, the swarms were also often ugly and hard to manage. The first summer I got them the man that was helping me was nearly stung to death in trying to hive a swarm from one of these colonies. Personally I never had much trouble in handling them, but there are a number of reasons why bees as vicious as these were are not desirable.

But the worst fault they had was their great robbing propensity. They were the worst bees to rob that I ever saw or heard of. They never robbed each other, but when no honey was to be had in the fields, they seemed to consider all the others fair prey. But for all their faults—and they had others—I think these bees had certainly greatly improved themselves in regard to honey-gathering, hardness and longevity.



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Dividing Colonies for Increase.

BY W. D. FRENCH.

There are many people in our midst who keep bees; but the practical and scientific apiarists of modern development are few. They are composed chiefly of that element who never look into, or read a bee-paper, and know nothing whatever of the progress of modern apiculture. Their anxiety and ambition is in the direction of increase, fostering the idea that bees must issue first, before their propensity leads them to store surplus honey; dividing and subdividing without the introduction of queens, or mature cells, being practiced indiscriminately, resulting in the end by a degeneration of their colonies. Subdividing, by allowing each subdivision to rear a queen from their own larva, takes away all energy and vigor from the working force, and produces a queen of inferiority; such queens are longer in hatching, and seldom prolific.

It must be born in mind that it requires nearly one month to mature a perfect queen, and fit her for egg-laying duties. It will be remembered also, that it requires 37 days to develop a worker-bee for field duty, in a normal condition; hence it will be seen that two months has elapsed before the progeny of the subdivision are able to sustain the colony, in which time all old bees have passed out of existence. While a queen in a populous hive will lay two and three thousand eggs every 24 hours, this one, under such conditions, will not exceed so many hundred for the next month to follow.

For the benefit of the inexperienced, I would suggest a method of increase which will be in accord with nature, producing queens of standard value, and with but little intermission on their part, compared with subdivision.

First, reduce the space of the colony to the capacity of five Langstroth frames, by means of a division-board, and allow only two queen-cells to be constructed at a time; the incapacity of the hive restricting the queen from performing her full duty, will compel an issue. Hive them in like manner, and so continue until towards the end of the season, when plenty of room should be given, allowing each colony ample opportunity to prepare their winter stores.

In a good season, where nectar-secrections are in abundance, it is astonishing to note the rapidity in which new colonies will be formed.

Foster, Calif.

Canadian Beedom.

Conducted by "BEE-MASTER."

The Color Question in Bees.

Mr. McArthur's article on this subject (on this page) will be read with interest, and is worthy of careful consideration. I do not understand that there is any prejudice against golden-hued bees except in connection with the idea that there is a certain degree of delicacy of constitution indicated by a brilliant yellow color.

It is to be observed that Mr. McArthur does not lay stress on color alone. There must also be a good pedigree. His position is, that every good quality can be so inbred that it will become indelible, and that in addition there may be the beautiful golden yellow tint which is so universally admired.

I suppose the advocates of leather-colored queens will take issue with Mr. McArthur, and state their objections to the bright yellow hue. But wintering those colonies on their summer stands in a position so bleak and exposed as Toronto Island, is about as severe a test of hardiness as bees of any race could be put to; and their having come through the ordeal so well speaks volumes in their favor.

A thorough discussion of this matter cannot but have a tendency to elicit the truth, which is what we are all after, that is, if we are not wedded to pet theories or blinded by self-interest.

A Few Facts About the Color of Bees.

Color is the most distinguishing mark or characteristic whereby we can distinguish one race of bees from another. Some who are very prominent in bee-circles say color is no proof of purity. Would these parties kindly explain themselves? Perhaps they have some better distinguishing mark; if so, please let us have it.

Objections are made to the yellow color—for what reason, I would like to know? It cannot be said that it is a weak color, being the very opposite of that, both in the animal and

vegetable world, different altogether from the albino, that shows a weakness in constitution wherever it occurs in the animal kingdom, blindness in some, while in others, deafness.

Let us look again to the vegetable kingdom, especially to herbaceous plants, where this sporting often occurs, and a green sends forth a complete white shoot. Try to propagate it, and you cannot, it is too weak to live. Now to show the effects of soil on herbaceous plants, if my memory serves me aright, I think it is Mr. Saulter (Nurseryman, Hammersmith, London, England) who says that by removing plants from one portion of his nursery to another they become variegated. This is purely the action of soil or plant food. This illustration is used merely to show how easily color can be changed or transmitted. If color is such an injury to the bee-business, or an eyesore to some, will they stand down and allow the negro to take their place? Mind you, I don't speak disparagingly of the negro, he is my brother. There are many noble minds among that race, but they are not as yet equal to the Caucasian race. This brings us to the divisions of the human family, which are as follows: White, brown, copper-colored, red, black and tawny, but can be reduced to three, namely, European, Asiatic and African, the other two being mere intervening shades or blends of color produced by crossing.

This illustration of color in the human race can with equal force be applied to our race of bees, and it is wonderful to think that the noblest races of man to be found are those of the regions of Asia Minor. Here it is supposed man was created; here he first received the breath of life, and arose in the image of his Maker. The die has not lost its divine impress, for here we still meet, and in all ages have met, so far as relates to exterior graces, with the most exquisite models of symmetry and beauty. Now when such can be said of the human race, is it not as wonderful that our beautiful races of bees also had their origin in this very spot, and have remained so for ages in their purity, probably existing ere man was?

I sincerely hope that those who are so anxious about the extermination of this color among our bees, as if it were a plague or epidemic, would give the matter a little consideration. Don't be too hasty in coming to conclusions. The experience of the writer is that they are excellent honey-gatherers, queens prolific, marked gentleness, large bees, especially so from the eighth to the twelfth cross, and very hardy. Having wintered several colonies on the summer stands on Toronto Island, to prove their hardiness, I can speak positively on this point. Several prominent bee-keepers advised me against the experiment, and said I would lose them. I thought so myself at one time, it being the severest winter on record. The result proved contrary to expectations. All came out alive, and are stronger than those put in the repository. So you see the yellow race can winter safely without a feather-bed. I want no better race, having bred them for 21 generations, and have no hesitation in saying that every good quality can be so inbred that it will become indelible. Those referred to originated from a pure Carniolan mother mated with yellow drones. I have followed on those lines for 21 generations, producing now perfect yellow queens, workers and drones, using the drones from one queen for four years, and can show any one all the stages from the first to the 21st generation.

Remember, this is no guess-work, being accomplished with precision, devoting four whole years to the task, without remuneration, but I have been well rewarded by the knowledge of facts. The conclusion I have arrived at is this: There is as vast a difference between the yellow race of bees, when pure and properly bred, and the blacks, as there is between the European and the African, notwithstanding the opposite views entertained by some; and seeing that man in his purity originated in Asia Minor, is it to be wondered at that this race of bees should also partake of some of those graces which man himself fell heir to?

JOHN MCARTHUR.

That Foul Brood Act—Other Jottings.

I notice on page 268-9 of the American Bee Journal, under the heading, "The Ontario Foul Brood Controversy," that there is a difference of opinion as to the meaning of Section 3 of the Ontario Act. Now as I myself had the honor of making the original draft of that Act, I feel a little hurt that there should be any two opinions as to what any part of it means, because if there is one thing at all about the fruit of my quill in which I might feel disposed to take a little pride it is clearness—calling a spade a spade, and a crook a crook. And I venture to say that Messrs. Clarke and McEvoy would find nothing in that original draft to dispute about as to meaning;

but then, you know, it would never do to allow a plain Bill to go through the Legislative Mill without the usual dressing of legal verbiage, and ambiguous parliamentary terminology! The meaning originally intended to be conveyed by Section 3 was undoubtedly that which the Agricultural Department at Toronto has put upon it as set forth by the Deputy Minister of Agriculture, in the correspondence which appears on page 269. It was not intended that the inspector should be prohibited from destroying the diseased colonies in the absence of the owners or possessors.

As to the dispute between Messrs. Clarke and McEvoy, I can give no opinion further than to say this: That when charges of so serious a nature are made by either side, at the outset of the discussion and before there has been even a full presentation of the case, the editor who abruptly and peremptorily shuts down on his correspondents, takes upon himself a grave responsibility. In such a case it would appear to me that the editor, having already published the charges on both sides, which he need not have done, really owes the disputants themselves and the public generally a higher and graver duty than he owes the few readers of his journal who might object to hearing anything more on the subject from either party.*

THE WEATHER AND THE PROSPECTS.

It is now the first of June, and it has been very seldom we have experienced a spring so exceptional in character in Ontario. The rainfall since the disappearance of the snow has been very slight, and the alternating high and low temperatures have been as unusual as they have been unfavorable in their effects. There was no weather in this district of Ontario (and it was worse in some other parts) fit to remove bees from their winter quarters before about April 20; nor did those wintered outside fly to any extent before that time. A few warm, fine days, however, about that time gave them all the necessary cleansing flights, and put them in fairly good condition. Then followed cool weather up to May 4, when the temperature suddenly went up to the 90's and remained there for a week, giving the bees as well as all vegetation a tremendous impetus. Fruit-trees came from the starting bud to the full bloom in one week—a thing which may have happened here before but I never saw it. The temperature then went down again to near the freezing point through the day and below it at night, forming ice. And this lasted with but little variation till a few days ago, when the heat came down again in earnest.

The results of all this have not been very favorable either to the bees or the general face of Nature. Of course the bees not put in comfortable condition during the cold weather succeeding the hot, suffered severely in the chilling of brood, etc. As to vegetation, much damage was done. Fruit was much injured—especially grapes, peaches and strawberries. Meadows and trees are much damaged, and a young basswood orchard I have come in for a pretty bad scorching. The foliage of two splendid butternut trees I have, which were in bloom when the cold wave came, was quite destroyed, and they now look barren enough. I had raised them "from the seed," having planted the butternuts 30 years ago. It took them three years to sprout and they are rather slow growers. The basswood did not suffer so badly—some 75 per cent. of them escaping with but little injury.

Considering the ups and downs of the weather, the bees at this date (June 2) are in good condition—my own are, at any rate, though I am hearing of serious losses among the inexperienced. The clover promises very well, though all vegetation needs rain badly.

THE PRACTICAL BEE-KEEPER.

This young bee-paper, which maintained a creditable existence over here for a time, has, it is to be regretted, been absorbed by the older one. It was hoped that the "Practical" would in time develop into filling the bill of what an apicultural journal ought to be.

The editor of the surviving journal says, I notice, that one bee-journal is enough for Canada. He did not think so when, a few years ago, he started the Canadian Honey-Producer in opposition to the old Canadian Bee Journal. It soon died, however.

THE NORTH AMERICAN CONVENTION.

In the rapid flight of time with busy people (and we know bee-men are very busy people) September will soon be here, and we hope to meet as many of our cousins from across the line in Toronto as can possibly get there. They can see the great Industrial Fair as well as attend the joint bee-convention.

Selby, Ontario.

ALLEN PRINGLE.

[*With due deference to Mr. Pringle's opinion; I am quite sure that it is always best to "shut down" on any and every discussion when it clearly appears that there is to follow more disrespectful personal-characterizations than legitimate argument. Had I known both sides of the case before publishing the first side, of course none of the personal controversy in question would have been permitted to appear in the American Bee Journal. As Mr. Clarke was not at all named in Mr. McEvoy's official report, he has only himself to blame for calling out the denunciations contained in a later article by Mr. McEvoy. As the Clarke-McEvoy personal troubles are of not the slightest interest to the public, and as they both had had their "say" in the matter under consideration, I felt justified in saying there would be no more of it in these columns.—Ed.]

Questions AND Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Two Laying Queens in One Hive.

Were bees ever known to keep more than one fertile queen at one time in the same brood-chamber?

Long, W. Va.

I. S.

ANSWER.—Oh, yes, often. A mother and daughter are sometimes found laying in the same hive, but generally not for a very long time, the mother being nearly played out. By saying "often" I don't mean you'll find them in every hive, nor in every year—perhaps one hive in 500—which isn't so very "often," is it?

Why Does Clover Bloom Yield Nothing?

How long does white clover have to be in blossom before it yields honey? I don't remember ever seeing white clover look as fine and plentiful as it does here at this date, yet my bees are not working on it, or on anything else to speak of, and all are in the best of condition. Is it not rather early for white clover, or is it on account of the warm weather we had in April?

L. S.

Aurora, Ill., June 1.

ANSWER.—Exactly the same condition prevails here at Marengo now (June 3). Clover is out in full bloom, but the bees are doing nothing. True, there is great need of rain, but I don't believe the trouble is from lack of rain. I'm very anxious to be mistaken, however, for I'd a good deal rather say I was wrong in my opinion than go through another year of dead failure.

Clover is earlier than usual, but not very much. The very first bloom was very much earlier than I ever knew it, but then came about two weeks of cool weather, when it stood still. Why it is that clover yields nothing is entirely beyond my knowledge.

Hives Where Bees Died—Hive for Wintering.

1. I have quite a number of fine combs out of hives that the bees died in during the past winter and spring, but I find there are considerable dead bees and pollen in the cells. Do you advise removing it before putting the new swarms on them, or would you let the bees do it themselves?

2. I find in nearly every hive, both those that bees have died in and in those whose colonies are strong and in good condition, more or less granulated honey. I never fed anything, and the temperature never went below 38° in the cellar, and that for a very short time. What is the cause?

3. I find that nearly every colony I lost starved and died in clusters between the empty combs, whilst there was plenty of honey in the outside combs, but they would not move out to get it. My hives are the 8-frame Langstroth; they appear to be too shallow for our long, cold winters. What would you think of a hive say 22 inches long, 12 deep, and 9 wide, to contain 6 frames, so that the colony would occupy all the combs, and could work lengthwise and upwards, and not have

to change from one comb to another? This would give a hive with about the same number of cubic inches. Bees in this latitude have to be confined from 5½ to 6 months.

My bees are all blacks, but I intend to introduce some Italian blood this summer. W. D. L.
Frankville, Ont., May 29.

ANSWERS.—1. You'll probably find it pretty slow work to pick out dead bees. If you put the combs where mice can get at them, they may pick out the dead bees, but look out they don't also dig the combs to pieces. If you soak the combs and let them stand a day or two, the pollen will ferment and swell, and a fresh addition of water may clear out most of the pollen. If they are not very bad, give them to the bees just as they are. If the pollen is not spoiled it may be worth as much to the bees as honey. But if the combs are moldy and the pollen soured, the swarm may desert the hive. Better give one or two frames at a time to a strong colony (not a swarm) to be cleaned out. Or, put a hive full of the combs under a hive of bees, so the bees will have to go up through the empty combs, and they will clean them.

2. Some honey will hardly granulate at all, and some will granulate in the hive before winter. Just what makes the difference I don't know. The weather and the thoroughness of ripening may have something to do with it.

3. I doubt if you would like a hive of the proposed form. Better not try more than a single one at first. Some have wintered successfully in very shallow hives.

Does Flax Yield Honey?

Does flax-bloom yield honey? and can bees gather it? If so, what color is the honey? M. R.

ANSWER.—I'm sorry to say I don't know anything about it. Will some one who lives in a flax region please tell us?

A Swarm that Hived Themselves.

I had, in the spring of 1894, one good strong colony left out of three. That colony sent out the first week in June, 1894, a very large swarm of bees; they settled so high up on an apple tree that I could not hive them, so they went to parts unknown. The parent colony all died the past winter—not a bee was seen about the hive all this spring, until last Saturday, June 1. I was in my garden and heard many bees buzzing and flying about. I went to the old hive and there found that a large swarm of bees had taken possession. There are no bees nearer my home than one mile. Can they be part of the swarm that I lost in 1894? Or are they a new family? They appear to be at home. The old frames were left in the box until now. J. H.
Marietta, Ohio.

ANSWER.—Your unoccupied hive acted as a decoy hive, a swarm looking for new quarters found it to their liking, and made themselves at home. The swarm may have come from some place a mile or five miles away, or it may have come from some colony in the woods near by.

Increase—Rearing Queens.

I have three colonies of bees, two in chaff hives, and one in a single-walled hive. On April 13 I took frames from the single-walled hive and put them into the chaff hive, and they are doing all right. On May 10 one colony swarmed. I cut the swarm from a tree, and put it into a new hive, and put a super on full of sections. The next day I looked at them, and most of the bees had left, and went back in the old hive. What was the cause? Did I do right?

2. On May 18 I examined the colony that had swarmed, and found 5 queen-cells. I then took out 4 frames of brood, one with 3 queen-cells on it, and put them into a new hive. They seem to be all right to-day. Did I do right?

3. Can I take, say three frames of brood and put in a new hive without any queen-cells in them, with plenty of bees? Can, and will, they rear a queen? L. E. S.
Ewing, Nebr., May 20.

ANSWERS.—1. Bees are so freaky at times that it's hard to tell why they do certain things, but it is possible that in some way they were without a queen, and so returned to the old hive. A queen may be accidentally killed at swarming, or she may be unable to fly with the swarm. Your proceeding was all right, at least it was not the cause of the bees desert-

ing the new hive, although it is generally preferred to have the swarm set on the old stand, the parent hive being set on a new stand.

2. There is some danger that you are dividing up too much. Under ordinary circumstances, unless you have an unusually good location for a long honey-yield, you will find that the mother colony will not build up any too strong for winter. When it is divided, as you have done, of course each part will be weaker than if left undisturbed, and you will need perhaps to feed and strengthen if you want to make sure of the two pulling through the winter.

3. They probably would rear a queen, for of course you would take with each comb its adhering bees, but many of the bees would return to the parent colony, leaving your nucleus very weak, and a queen reared by them would not be such as it would be profitable to keep. The queen is the most important factor in a hive, and it pays to be at great pains to have queens of the best sort. A queen reared in a full colony is none too good.

What Ails These Bees?

Last Friday afternoon I had a strong colony of Italian bees apparently in good condition. To-day (Monday) there is but a mere handful of discouraged looking bees, and without a queen. They are in a chaff-hive containing 10 Langstroth frames. I had been feeding them a little syrup made from granulated sugar, each evening to stimulate brood-rearing as fast as possible. They build up very fast, and two weeks ago had brood in eight frames, and bees covering well nine frames. Then the queen nearly stopped laying, and on Friday last there was but one little patch of eggs. They had plenty of honey in the hive, and have yet. I found larvae in the cells without any food, and they looked as if they were starved to death. I do not understand why a strong colony should let the larvae starve when they have plenty of honey in the hive.

The bees crawl out of the hive on the ground and finally die. When I first noticed it, the ground for several feet around the hive was covered with bees, and are that way yet. They keep crawling out in this way, one at a time, never to return. The hive-entrance and the ground in front of the hive is spotted with a yellowish substance, but was not noticeable the first day.

Is this dysentery? and what has caused it? The hive has been kept dry and warm, having a chaff cushion over the frames until the present time. Is dysentery the same as bee-paralysis? Is the so-called "nameless bee-disease" anything like this? J. W. P.

Omaha, Nebr., May 30.

ANSWER.—I must confess I don't know enough to answer, and should be glad if any one can give some light. Bee-paralysis and the "nameless disease" are the same thing, but different from dysentery. The spotting looks like dysentery, but bees don't have trouble with dysentery when they can fly freely. The crawling out of the hive is a little like bee-paralysis, but that disease doesn't make such rapid progress so far North as Nebraska. I might say it looks like a case of poisoning, but that's only another way of saying I don't know anything about it. I wish you would tell us how the case terminates.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, you could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's only 10 cents for 10 weeks, to all not now subscribers to the Bee Journal.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—Ed.]

Mixed Bees—Chestnut and Corn-Tassel Bloom—Making Foundation and Hives.

1. I have the Italian and black bees, and if I were to get the Carniolan bees, and they were to mix with the other two races, what would be the result?
2. Do you think chestnut bloom and corn-tassel yield any honey? I do not think I ever saw a bee still enough on either bloom to gather nectar.
3. Is there any cheaper machine to make foundation than those mills from \$15 to \$40? Would it pay a man to get a machine and make his own foundation when he keeps from 50 to 75 colonies, and can get beeswax for 18 cents per pound?
4. If I were to get a contract to make from 100 to 150 hives, could I get some machine to rip the boards and square them without the handsaw and the square?

M. W. G., Bankston, Ala.

ANSWERS.—1. The result would be a mongrel variety of bees.

2. Not much honey—more pollen; yet I have known corn-tassel to yield honey in sufficient quantity for the bees to store in the surplus department.

3. I do not know of any. It would not pay you if you had any other business to attend to.

4. You can get a machine to do the work. The Barnes or the Seneca Falls machines are good. See their advertisements in this journal, and write to them for prices.

A Swarming-Time Experience.

DR. BROWN:—I have a colony of black bees which cast a swarm April 25. It was hived on the old stand, and the parent colony, after a day or two, was moved to a new location. About May 1 an after-swarm came out, which I caught in a swarm-catcher, when they immediately returned to the hive. The next day the same process was repeated.

On May 11 they came out the third time, and were hived, a frame of eggs being given them. In four days they had sealed queen-cells, showing that they were queenless. The parent colony, a few days after the swarm came out, was found to have a laying worker, so the two were united, and now have a virgin queen, and seem to be all right. Why did they swarm when there was no queen in the hive? What should I have done to prevent this state of affairs?

Brinkleyville, N. C.

R. B. H.

ANSWER.—Such cases as Mr. H. describes do not often occur. Sometimes when bees are determined on swarming they become so excited, that, if the queen hesitates about going out with them, they will proceed to ball and kill her. In this way the queen was probably dispatched in the old hive. The operations with the swarm-catcher may have added to this state of affairs. It is generally supposed that a queenless swarm will return to the parent hive. They will more certainly do this if they discover the loss of queen before they settle; but if she is lost during the operation of hiving, they will often remain in the new hive, and will proceed to make queen-cells when brood is given them. Under the circumstances, I don't see how you could have done better.

Management of Transferring.

DR. BROWN:—Having within about a year become quite interested in bees, and although I am considerably on the shady side of 50, I find that I can learn, and have learned, a good deal about them in that time, and with the assistance of my family (who in myself up to that time looked at bees simply as things that stung and stored honey) have attained to such acts as transferring from common box-hive to Simplicity, and similar feats with considerable success, and from two colonies have in various ways attained to 15, and in good trim and working like beavers. Yet I often find "something else" coming up to learn about, and would like to see the fol-

lowing practice discussed in the Bee Journal, if not out of place:

In transferring from a very large box-hive full of comb, bees, honey, brood, etc., I found I could not get over two-thirds into a Simplicity hive. I was at a loss what to do, and concluded to fill, or nearly fill, two, and put one on top of the other. After a week or ten days I put a queen-excluder between the two, so as to ascertain which the queen was in, as being black bees she was hard to find; and after four days I looked them over and put the one that had the queen in, as shown by the eggs, on a new stand, with a board up in front to mark the location for the bees; and the part without the queen I put on the old stand. In a couple of days I introduced to it an Italian queen, and both colonies went right along in good order. Was it a good practice? In what was it deficient, and what are the dangers, if any?

The success of the above led to the query in my mind, Why not artificially "swarm" other colonies in the same way? Acting thereon, I have just manipulated a colony of Italians with the exception that seeing the queen I did not use the excluder; two or three frames had queen-cells on, one capped, the others not; the hive was very full, and I looked for them to swarm in a few days, and did this to prevent it. The queen with 5 frames of brood, honey, etc., and 3 frames of foundation I left on the old stand; the balance (7 frames of honey, brood, etc.) I put on the new stand, the frames having queen-cells being among them. They had increased them from 8 to 12 frames while they remained one over the other. In a day or two I propose to cut out queen-cells and introduce a laying queen. Is this all right? If not, what is wrong?

I forgot to say the hive on the new stand has plenty of bees, but as they come out and in very little, I suppose them to be nearly all young bees. Do you think this will hinder their swarming? C. E. M., Asheville, N. C., May 28.

ANSWER.—I see nothing objectionable in your plan; only in the second case, had you placed the part containing the queen on the new stand instead of the old, the force of working bees would have been better divided. After a bee emerges from the cell it takes some days before it can go out for forage.

Wants Extracted Honey—Several Questions.

DR. BROWN:—One year ago I purchased two colonies of black bees, and one of them swarmed the next day. I now have 9 colonies, but some are weak, being only divisions of colonies. Now for my question: How would you advise me to manage my bees for extracted honey? Our honey-resources continue almost the entire year, but at no time is there a very good flow, unless it be very early in the spring. I know of no bees near me in frame hives, but bees in box-hives generally gather more than they require to carry them through the winter.

I have 9 colonies now, and hope to increase to 20 next year, and after that I do not care for any increase. My first swarms this year were from April 8 to 10, containing 2½ or 3 gallons of bees.

Bees have been busy this year, first on fruit-bloom, and then red-bud, willow, rattan, locust, mustard, poison-vine, blackberry, and honey-dew. They are now working on sumac and buckwheat. Bitterweed will soon be in bloom, which yields somewhat until frost, but results in very bitter honey.

I timed the bees as they came in filled with honey-dew when they were working most, and the average of three minute tests on three colonies was 142, 170 and 195 bees per minute. Is this fast enough to depend on for honey, or should I have more bees per colony?

My bees are in 8-frame hives. Would you advise a different sized hive? Also, would it be better to have Italian than black bees? C. H., Bonham, Tex., May 30.

ANSWER.—For a location like yours, where there is a continuous but no great rapid flow of honey, I should prefer a 10 or 12 frame one-story hive, and extract from the outside frames; but as you have the 8-frame hive, I should place on top a half-story with half frames.

From your report, your bees would seem to be sufficiently strong, and if they don't store any honey, it will be because there is none to gather.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only \$1.10. Or, send us one new subscriber for a year (with \$1.00), and we will mail you a copy of the song free.

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George W. York, Editor.

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Editorial Budget.

Don't Wait till after your best friends have passed away before speaking a kind word to or about them, or doing them a kindness. Better give some flowers now, rather than to save them all for the funeral.

The Bee-Keepers' Educational Society of Rhode Island will hold its next meeting on Friday evening, June 21, at 8 o'clock, at No. 21 Custom House Street, Providence, R. I. Mr. Samuel Cushman will read an essay on the "Relation of Bees to Fruit and Flowers." It is expected that Mr. J. E. Pond will be present. All are invited to attend. Mr. W. G. Gartside, is the Secretary, and his address is 295 Globe Street, Providence.

The Good Old Times seem almost to have come to the region of Higginsville, Mo., for Bro. Leahy in the Progressive Bee-Keeper for June speaks very encouragingly in the following editorial paragraph:

We are now having plenty of rain—apparently just enough. White clover is in full bloom, and we are sure of a good honey crop this year; in fact, part of it is in the hives already. It is almost like the good old times—at least it reminds us of them—when the land, as it were, flowed with milk and honey.

Somnambulist says in the June Progressive that (s)he believes (s)he must be a "veritable Somnambulist." I can hardly believe it, for real "sleep-walkers" often meet with accidents during their nocturnal meanderings, and so far Sommy has been able to keep right side up without a slip. Some have wondered who Somnambulist is. I don't. 'Cause why? Why, Dr. Miller told me *he* knew. He said Somnambulist reads the Bee Journal. I turned right to the list, and sure enough, right there is the name and address. This evidence can't be nullified, even if the real name isn't "Somnambulist."

A Foreign Invitation.—I am glad to acknowledge the courtesy of Mr. F. Liedloff, the able editor of Leipziger Bienenzeitung, in sending me an invitation to attend the 40th convention of the German, Austrian and Hungarian Bee-Keepers' Association, which occurs Aug. 10 to 18, at Leipzig, in connection with an exposition. What a grand time they will have with such great numbers in attendance as we never dream of in this country. We have much to learn from our German brethren, particularly along the line of bee-conventions. I trust the gathering referred to above will be as profitable and enjoyable as it will be large and enthusiastic.

How to Make Honey-Vinegar.—Mr. Chas. F. Kehn, of Iowa, requests that the manner of making honey-vinegar be again given in the Bee Journal. At the risk of being charged with too frequent repetition, and yet on account of the many comparatively new readers of the Bee Journal, the following, by Chas. Dadant & Son, on the subject of honey-vinegar, is reproduced:

It takes from 1 to 1½ pounds of honey to make one gallon of vinegar. Two good authorities on honey-vinegar, Messrs. Muth and Bingham, advise the use of only one pound of honey with enough water, to make each gallon of vinegar. We prefer to use a little more honey, as it makes stronger vinegar, but the weaker grade is more quickly made. If the honey-water was too sweet, the fermentation would be much slower, and with difficulty change from the alcoholic, which is the first stage, into the acetic. This change of fermentation may be hurried by the addition of a little vinegar, or of what is commonly called vinegar mother.

If honey-water, from cappings, is used, a good test of its strength is to put an egg in it. The egg should float, coming up to the surface at once. If it does not rise easily, there is too little honey. As vinegar is made by the combined action of air and warmth, the barrel in which it is contained must be only partly filled, and should be kept as warm as convenient. It is best to make a hole in each head of the barrel, about four or five inches below the upper stave, to secure a current of air above the liquid. These, as well as the bung-hole, should be covered with very fine wire-screen, or with cloth, to stop insects.

A very prompt method consists in allowing the liquid to drip slowly from one barrel to another, as often as possible during warm weather.

As we make vinegar not only for our own use, but also to sell to our neighbors, we keep two barrels, one of vinegar already made, the other fermenting. When we draw a gallon of vinegar, we replace it with a gallon from the other barrel.

Brimstoning Hives with Combs.—Mr. B. Taylor, in the Farm, Stock and Home, gave this method of treating hives in which the bees had died during the winter, to prevent the destruction of the combs by the moth:

The hives containing combs from dead colonies I piled four or five high, and brimstoned every ten days until used. I did this by setting an empty hive-body on top of the piles, in this placing an old milk-can with something under it so as not to burn the combs below, then burning some rags which have been dipped in melted sulphur in the pan, covering all tightly with a sheet of tin or other metal.

Editor Holtermann says in the Canadian Bee Journal that he "would hardly care to see women in parliament." He was commenting on an editorial in this journal on page 268, where I said I was "willing to give the women a chance to try their hand at doing justice" to the pursuit of apiculture when the "men" had failed so to do. I still feel that not much of real help to any good cause need be expected from wire-pulling politicians, so I'm not disappointed when they do nothing. Best way is to send *genuine workers* to the legislature and parliament, and not politicians.

Value of Bees to Orchardists.—In the Ohio Farmer of recent date a correspondent in Portage county, Ohio, gives a short account of "one season with bees," in which, after telling how he manipulated them, he says this of their great importance to those interested in orchards:

While the income in honey was probably sufficient to well repay us for the time and expense placed upon the bees last year, we are far from believing that this is the only benefit that we have received from them. They stood just in the edge of our six-acre apple-orchard, from which I took last year more than 600 bushels of apples. A friend who was in the orchard while we were picking, remarked: "You may credit this large crop of apples to your sheep that have fertilized the soil, and to your bees which fertilized the blossoms."

A farmer and orchardist living in an adjoining township, said: "I want to get three or four colonies of bees, place

them in my orchard and let them take care of themselves. For a good many years I had a neighbor who kept a number of colonies of bees, and I always had a good crop of fruit. About five years ago he moved away, and since then there have been no bees nearer than two miles from me. I have not had a decent crop of fruit since. Last year my apple orchard of 20 acres did not yield 200 bushels." This gentleman's orchard stands upon a considerable elevation, underlaid with sandstone—a position generally believed to be peculiarly fitted for fruit-growing.

These statements go to show the line in which popular opinion is tending in regard to the aid which bees give in the proper fertilization of the fruit-blossoms. Scientific investigations, as well as careful observations, have shown that this opinion is the correct one. While there are seasons when the weather is such that the bees cannot work upon the blossoms, and we get but a small amount of fruit, the quantity any year would be very small indeed if it were not for the bees and their work. Let us give these useful insects full credit for this benefit, as well as for the sweet which they collect for us.

Make the Best of Circumstances.—Mrs. A. L. Hallenbeck, in the May number of the *Progressive Bee-Keeper*, closes her "Nebraska Notes" with this chunk of wisdom, which should be memorized:

Circumstances have brought home to my mind lately the fact that in whatever walk in life we may be situated, it is well for us to learn to make the best of circumstances; to take whatever of good or value we may have at our disposal, and make of it the most we can. It may be far from what we would prefer, and seem scarcely worthy of our notice; still, while we earnestly try to do our very best, the unwished-for duty may grow to be a holy work of love, and the dusty, tedious sands we tread in our daily toil may hold for us riches far greater than those we had hoped to gain by climbing heights for which we longed, while the coveted treasures for which we thought to travel far, we find lying at our very feet.

A California Bee-Story.—We find the following in one of our exchanges, which may cause some of the readers of the *Bee Journal*, who live near "probably the largest bee-hive in the world," to investigate and report:

Probably the largest bee-hive in the world is that at Bee Rock, Calif. The rock is, in fact, itself the hive. It is a granite boulder rising abruptly from the bed of a little affluent of the Arroyo Alcade, and it is seamed and scored with fissures of divers sizes, whose depths have never been sounded. They are all inhabited by a vast population of bees, and overflow with honey. It is impossible to estimate the quantity stored in the hidden recesses, and it is needless to say that nobody would be bold enough to explore. It is not without considerable peril that honey-hunters rifle the bees of that which appears at the edge of and outside the fissures, and that comes to many hundred pounds' weight every year.

Bleaching Beeswax.—In reply to a question about bleaching beeswax, an exchange says this:

Beeswax may be bleached by melting it, and for every pound adding two ounces of pulverized nitrate of soda and one ounce of oil of vitriol diluted previously with eight ounces of water. While the latter is gradually poured in, heat is applied, and the mixtures swells greatly, necessitating a large vessel. On cooling, the wax gathers on the surface.

Those who have the opportunity, might try this on a small scale, and report the outcome.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for \$1.50; 100 for \$2.50. Better give them a trial. Send all orders to the *Bee Journal* office.

Among the Bee-Papers

Conducted by "GLENER."

GETTING WORKER-COMB BUILT.

An experience of more than 25 years along this line has proven to me that bees cannot be depended upon to build worker-comb during the first week after being hived, if there is any completed comb in the hive at the time of the hiving of a prime swarm. With second or third swarms the case is different, as bees are more apt to build worker-comb with a queen when she first commences to lay, and only unfertile queens accompany these latter swarms; and in this case the queen does not commence to lay till the bees are fully accustomed to their surroundings. My advice to all is, use only starters in the frames in hiving swarms, or else fill all frames with foundation, or give all frames filled with combs.—Doolittle, in *Gleanings*.

FORM OF HIVE.

S. E. Miller, in *Progressive Bee-Keeper*, refers to the different opinions as to form of hive—shallow, deep, square, etc.—and then turns to see what the bees prefer in their natural state. Generally they select a cylindrical cavity in the forest, and it "may be from four to twelve inches or more in diameter, and from two to six feet or more in length, and it seems to matter very little whether it stands perpendicular or lies horizontally. The bees will adapt themselves to the form of their abode, and probably rear as much brood and store as much honey as they would in a modern hive, provided all other conditions were the same. Thus it would seem that the honey-bee was created to adapt itself to surroundings instead of the circumstances having to adapt themselves particularly to the bee!" So he concludes the form of the hive doesn't particularly matter, so far as the bee is concerned.

ORIGIN OF 5-BANDED BEES.

I see I failed to make myself understood where I said that "all of the yellow bees of to-day, having Italian origin, came directly or indirectly from either Mr. Hearn or myself." In this I did not claim all of the 5-banded bees, only those of Italian origin. Mr. Swinson, of South Carolina, and others, produced bees showing five bands fully as soon as either Mr. Hearn or myself, but these bees came from a mixture of Cyprian, Syrian, and other bees, with no claim that they were aught else. Why I made the claim that I did, as to the origin of the very yellow ITALIAN bees, was from the fact that I have written to nearly all those claiming to have very yellow Italian bees, who had not purchased queens direct of us, and upon their giving the source from whence their yellow bees came, I found that this source was those who had purchased of either Mr. Hearn or myself. Thus I said "directly or indirectly."—G. M. Doolittle, in *Progressive*.

TANGING BEES.

Practical bee-keepers nowadays generally condemn as useless the practice of making a noise of any kind to induce a swarm of bees to settle when inclined to abscond. But now comes no less practical a bee-keeper than S. T. Pettit, defending the practice in *Canadian Bee Journal*. As apparatus he uses two good cow-bells. He says:

"For handles I used stiff leather, like harness tugs. With a bell in each hand and an even start we have not once in about 15 years failed to save absconders, and we have had many severe tests. . . . Always have the bells ready at hand. The trained eye can generally detect the intentions of the bees before they start. Now just as soon as you see the course they are after, step right in front of the leaders and open fire. Now, mind you, there must be no cessation or slacking, no, not for a single moment; the job must be energetically and well done, and victory is sure. During the operation you must keep your eye upon the leaders, and if they veer to go round you, keep in front of them—in fact, you must keep ahead of all the bees. Some few stubborn swarms may drive you 40 rods or more, but such cases are unusual."

RENEWING QUEENS.

Doolittle says in *Gleanings* that he has found that three-fourths of the superseding of queens takes place during the three weeks immediately after the basswood, the main honey-flow. So he takes advantage of this to replace objectionable queens or those more than a year old. He says:

"To this end I start a greater number of queen-cells than

usual, from five to eight days before the expected close of the basswood honey harvest; and when these cells mature, hunt out the old queen and dispose of her, giving a mature cell 24 hours after having removed the old queen. If cell-protectors are used, the cell can be given at the time of removing the old queen, thus saving once opening of the hive; for, as a rule, the bees allow a queen to hatch all right where a cell-protector is used."

If the queen is to be replaced only because the new one is younger, and the bees kill the young one instead of the old one, then he concludes it is all right, as the bees know their business and will not keep a queen that is likely to play out.

But notice this manner of Italianizing or renewing queens must be *after* and not before the honey harvest, for if tried early the young queen will generally be killed.

Notes AND Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Ignorance in the Name of Science.—"After two or three years of laborious existence the bee dies."

"A hive often produces from 12 to 20 pounds of honey each year, and a proportional quantity of wax."

"The European bee has been acclimatized in America, but it soon returns to its wild state, as indeed do all our domestic animals when tempted to another hemisphere."

"By means of the physical education and the special nourishment they give them, queens are made from larvae."

"The lives of the males are spared in those hives which,

instead of a true queen, have only a female half (?) impregnated."

The above quotations are all taken from a translation of a French writer, Figuer, who was born in 1819, and who has devoted his life to the study of scientific subjects. More, I find this book in our public library, presumably placed there as an authority on entomology. Is it any wonder the editor of the *Cosmopolitan* made the head-lines (which he had the presumption to add to Mr. Hutchinson's excellent article) bristle with the male gender? The world "moves," but sometimes I am inclined to think it moves *very slow*, and that some people who "know a heap," know *very little* after all.

The Best Hive for Winter.—"I have lost all of my bees of six colonies in single hives [frames hives, I conclude] and one in a Well's hive, while two skeps (colonies) of my own and two of my neighbor's are apparently in good condition."....."I am not a 'skepist,' but my belief in the excellency of the skep for wintering is confirmed."—A. P. J., in *British Bee Journal*.

"The colonies in skeps also are alive and hard at work now, appearing to be somewhat stronger than those in frame hives."—Geo. Brealey, in *British Bee Journal*.

It would be interesting to know how many have had a similar experience, not only in England, but all over the world. It may come to pass after all that the hive does have something to do with the success of the bee-keeper, especially when that hive is so constructed as to interfere with the natural condition of things. I would be glad if the box-hive people would report to me or the editor, and let us know how their bees came through the winter. Of course there are many things to take into consideration, but such a report might cause us to revise some of our ideas and methods.

Italian BEES & QUEENS

Ready in May. Queens, \$1.00. Bees by the Pound, \$1.00. Two-frame Nuclei, with Queen \$2.50. One-frame, \$2.00. Also, **Barred P. R. Eggs**, for setting, \$1.00 per 15.

Mrs. A. A. SIMPSON, Box 48, Swarts, Pa.
15A13t Please mention the Bee Journal.

Woodcliff Queens.

I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—at 75c., and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping about May 1st. No Queens superior to my Strain.

Send for Descriptive Catalogue and Testimonials, to

WM. A. SELSER, WYNCOTE, PA.

COMB FOUNDATION.

Made by Improved Machinery.

Get Samples.

Here are prices by the pound—just compare.

	1 lb.	5 lbs.	10 lbs.	25 lbs.
Heavy or Medium Brood	42c.	40c.	39c.	38c.
Light	44	42	41	40
Thin Surplus	50	47	46	45
Extra-Thin Sur.	55	52	51	50

If wanted at those prices, send to

W. J. Finch, Jr., Springfield, Ill

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

1895 SAVE MONEY 1895

If you want first-class **ITALIAN QUEENS FOR BUSINESS, Foundation at Wholesale Prices, Hives, suited for the South, or SUPPLIES**, send for Price-List—to

J. P. H. BROWN, AUGUSTA, GA.

10A13t Mention the American Bee Journal.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.
100 State Street.

The Azure-Blue Sky.

It is the sun shining through the dust floating in the air that imparts to the sky the beautiful azure blue we all so much admire. There is only this dust between us and the sun.

Dust and Light.

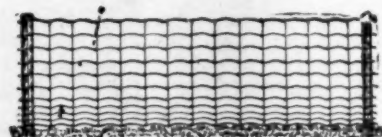
What we actually see in a streak of sunlight entering a dark place, like a cellar, is the glint of the sun on the particles of dust the air contains. But for the dust, there would be little light.

When Microbe Meets Microbe.

The virulence of typhoid fever microbes has been largely exploited. Now comes Dr. Rumpf, who has cultivated another microbe that cures typhoid fever in eight days. In words more intelligible to boys, Dr. Rumpf "sicks" his microbe on Dr. Fraenckel's microbe, and the latter is whipped!—and typhoid fever is cured. It is only repeating what I have said before, that microbes in the system are like the fish in the sea—they feed upon each other.

Too Vivid Imaginations.

It seems to be the special mission on earth of some people to enlarge upon the dangers that are supposed to surround us. If a neighbor takes sick he's sure to die! Any eruption of the skin is magnified into a contagious disease; the least sore throat is diphtheria, and so on—to set everybody's nerves on a tension. Usually such romancers know nothing of the conditions that actually exist. They simply have a morbid desire to see people alarmed. Keep a large grain of salt for their benefit!



FOUR OF A KIND.

A certain railway official wrote the officers in charge of fencing on four great Railroads, where "the Page" is in use, asking the "honest opinion" as to its value. He considered the answer so very favorable that he gave a large order for the kind he represented. The replies were confidential, but he stated that the strongest endorsement came from where "the Page" had been longest in use. If farmers took such precautions, those who furnish "cheap" wire fences would go out of business.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention the American Bee Journal.

Ready to Mail!

Untested Italian Queens are now ready to mail. Price, \$1.00 each; six for \$5.00; twelve for \$9.00.

T. R. CANADY,

23A5t FALLBROOK, CALIF.

Mention the American Bee Journal.

DO YOU WASH DISHES?

No need of it. The Faultless Quaker will do it for you and save time, hands, dishes, money, and patience; no scalded hands, broken or chipped dishes, no muss. Washes, rinses, dries and polishes quickly. Made of best material, lasts a lifetime. Sell at sight. Agents, women or men of honor desiring employment may have paying business by writing now for descriptive circulars and terms to agents.

The QUAKER NOVELTY CO., Salem, O.

Mention the American Bee Journal.

SPECIAL OFFER.

For July and August only. To those who have never tried our strain of Honey-Gathering Italians, we will make this Special Offer for July and August only, to introduce our Bees in your locality: We will send one Warranted Queen in July and Aug. for the trifling sum of 50 cts. Remember, the Queens we are going to send out for 50 cts. are warranted to be purely-mated, and if not, send us a statement of the fact and we will send another free of charge. Only one Queen will be sent at the above price to one address. If you want any more you must pay full price as per Table of Queens in our Circular, which we mail with each Queen. Address all orders to—

Leininger Bros., Fort Jennings, Ohio.

22A5 Mention the American Bee Journal.

SUPPLIES BEES QUEENS

LARGE STOCK. LOW PRICES.

Catalogue Free.

I. J. STRINGHAM,

105 Park Place. NEW YORK, N. Y.

HELLO!

Had you noticed that we have a bee-journal in the South? Well, we have. Send us \$1.00 and receive "THE SOUTHLAND QUEEN" one year. Fresh, Practical and Plain. Jennie Atchley begins a Bee-Keepers' School in it June 15.

A Steam Bee-Hive Factory. Send for Free Catalogue and Sample Copy of "The Southland Queen."

THE JENNIE ATCHLEY CO.

22Atf BEEVILLE, Bee Co., TEX.

GOLDEN QUEENS Solid Yellow, \$1; Yellow low to tip, 75c; darker 60c. Tested \$1 to \$2. Breeders, \$3. Best, \$5. Samples of Bees, 2c. None better for Honey, Beauty and Gentleness. Ready now. Fully guaranteed.

F. C. MORROW, Wallaceburg, Ark.

20A13 Mention the American Bee Journal.

PASTE That Will Stick ANYTHING.

We have finally succeeded in finding a Paste that will stick labels to tin, glass, etc.—just thing bee-keepers have wanted. It will do the business wherever any "stickum" is required. It is guaranteed to do the work. It is put up ready for immediate use, in the following size packages, and at the prices given, by express: ¼-gal., 70c.; 1 gal. \$1.00; 2, 3, 4 or 5 gals., 75c. per gal. It weighs about 8 lbs. to the gallon. Sample of Paste, postpaid, 25c. Address all orders to—

GEORGE W. YORK & CO.,

CHICAGO, ILLS.



Promptness Is What Counts!

Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country. Dealer in Honey and Beeswax. Catalogue Free.

Walter S. Pouder
162 Mass. Ave.
INDIANAPOLIS, IND.

H. G. Acklin, 1024 Mississippi St. St. Paul, Minn.

Northwestern Agent For

The A. I. Root Co.'s Apiarian Supplies

Send for
Price-List

BEES AND QUEENS
For Sale.

21A17 Mention the American Bee Journal.

YELLOW TO THE TIP— Are the Italian Queens that I can send by registered mail at \$1.00 each or six for \$5.00. Not one in 100 will prove mated, and any that do not produce three-banded Bees will be replaced. Tested Queens after June 15th, same price as above.

W. H. PRIDGEN,

CREEK, Warren Co., N. C.

Mention the American Bee Journal.

General Items.

Good Honey Crop Expected.

My bees are doing well this spring. I started last spring with 8 colonies, and now have 24. I have just put the supers on. This year is favorable for a good honey crop here in California.

I think the American Bee Journal just the thing for any one having bees.

Fowler, Calif., May 25. A. W. WARD.

Rolling in the Honey.

The bees are just rolling in the honey from the poplar and Alsike clover. There is a good prospect if it rains soon. It is very dry here, as we have had very little rain since April. The bees filled their hives from the fruit-bloom, and put some in the sections.

I tried a small lot of Italian clover. It commenced to bloom the first of May, between fruit-bloom and clover. It is just the thing for bee-keepers.

The bees wintered badly. I have 16 colonies out of 32. WINCHESTER RICKEL.

Burket, Ind., June 3.

Best Flow in 10 Years.

Bees wintered well here the past winter, and there has been a splendid honey-flow this spring—the best we have had for 10 years.

Bees have swarmed well, but I have had bad luck with mine, having saved only 15 swarms from 21 old colonies, some uniting and some going to the woods. I hived a swarm six weeks ago to-day, in an empty box-hive; now it is full of honey, and they have swarmed.

We are having fine weather now, much to the delight of everybody.

Grifton, N. C., June 3. B. H. IVES.

The Way I Manage My Apiary.

I winter my bees in a cave. I take them out when the maples are in bloom. The next day, if it is warm enough, I look over each colony, clip each queen's wing, if not clipped, and then I give each colony a clean hive. If they need feeding I put on a double hive, and then two chaff cushions; take a quart or half-gallon Mason jars filled with syrup, tie a cloth over the mouth of the jar, and invert it on the frames between the chaff cushions, then take pieces of carpet, or any other material, and put it over the jars to keep the brood warm. I don't have to disturb the colonies to feed them. I take off the cover and raise the cloths, when I can see if the jars are empty, and replace them with full ones, so the brood is never chilled. I leave the cushions on till cold nights are over.

When a colony swarms, I have a little queen-cage, and I pick up the queen when she hops out and cage her. I put this cage on top of a hive that I want them to go in. In less than half an hour they will find the queen and begin to come down on the hive. Then I put the cage at the entrance, and they will go in. I then open queen-cage

GOLDEN QUEENS

From Texas. My Bees are bred as well as for Beauty and Gentleness. Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, 75c—Warranted, \$1.

J. D. GIVENS, LISBON, TEX.
Box 3

10A26 Mention the American Bee Journal.

* BEST GOODS *

At lowest prices are what we are all after. The QUALITY of Cary's Goods has never been questioned. His XX White Thin Foundation and Polished 1-Piece Sections are the Finest on the market. His

BEES and QUEENS

are from the best strains, and reared and shipped in the way that long years of experience have shown to be the best.

He has the largest Stock of

BEE-KEEPERS' SUPPLIES

in New England; and as to Prices, you have only to send for a Catalog and compare them with those of other dealers.

To those living in the East, there is the still further consideration of low freight rates Address.

W. W. CARY, COLRAIN, MASS.

22A5 Mention American Bee Journal when writing.



UNTESTED ITALIAN QUEENS.

Reared from a Queen valued at \$50. Can't be excelled as honey-gatherers; 75 cents each. Address

W. J. FOREHAND,

22A5 FORT DEPOSIT, ALA.

Mention the American Bee Journal.

ITALIAN QUEENS!

Untested, July to Oct., 75c. each—3 for \$2.00.

Tested Queens, \$1.00 each.

By return mail. Satisfaction Guaranteed. Send for Free Illustrated Circular to

THEODORE BENDER,

22A5 18 Fulton St., CANTON, OHIO.

Mention the American Bee Journal.



STRAW HIVE

Latest and Best.

Perfectly adapted to Modern Bee Culture.

Illustrated Circular Free.

HAYCK BROS., QUINCY, ILL.

19A8 Please mention the Bee Journal.

GARDEN CITY, Kan., May 13, 1895.

P. J. THOMAS, Fredonia, Kan.—
Honor to whom honor is due. The Queen you sent me proved the best out of six I bought from different Breeders.

J. HUFFMAN.

Big Yellow Golden Italian Queens 75c

Three for \$2.00. Three-banded, same price. 1-Frame Nucleus, with Untested Queen, \$1.75 2-frame, \$2.25. Satisfaction guaranteed.

P. J. THOMAS, Fredonia, Kan.

Mention the American Bee Journal. 22A5

GLOBE BEE-VEIL

By Mail for \$1.00.

A center rivet holds 5 spring-steel cross-bars like a globe to support the bobinet Veil. These button to a neat brass neck-band, holding it firmly. It is easily put together; no trouble to put on, or take off. An absolute protection against any insect that flies. Will go over any ordinary sized hat; can be worn in bed without discomfort; fits any head; does not obstruct the vision; folds compactly, and can be carried in the pocket; in short, it is invaluable to any one whom flies bother, mosquitoes bite, or bees sting.

GEORGE W. YORK & CO.,

CHICAGO, ILLS.

Italian Queens

Warranted Purely Mated, 50 cts. each.
Tested, 75 cts., or 2 for \$1.00; 12 for \$5.00
Good Breeders, \$2.00 each.

F. A. CROWELL,

24A5t GRANGER, Fillmore Co., MINN.

Mention the American Bee Journal.

THROAT AND LUNG DISEASES,

DR. PEIRO, Specialist
Offices: 1019, 100 State St.,
CHICAGO. Hours 9 to 4.

—FROM IMPORTED MOTHERS—

I have got 50 Fine, Choice, Select Breeding Italian Queens—\$1.25 each: Untested, 50 cts. About 10 out of every 12 will make fine tested Queens. List Free. **L. E. EVANS,**
24E4t ONSTED, Lenawee Co., MICH.

Mention the American Bee Journal.

Orange-Blossom, Alfalfa or Sage

HONEY

For Sale Cheap.

15Dtf C. W. Dayton, Florence, Calif.

Globe Bee Veil

By Mail for One Dollar.



Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through. It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

This Veil we club with the Bee Journal for one year—both for \$1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at \$1.00 each.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

"Northern Bred Queens"

Our Northern Bred Gray Carniolans and Golden Italian Queens Produce Hardy Bees that Winter Successfully.

We make Queen-Rearing a Specialty. We never saw Foul Brood or Bee-Paralysis.

Don't fail to send for Our Free Descriptive Price-List.

Our Prices Are Away DOWN

F. A. LOCKHART & CO.,
17D LAKE GEORGE, N. Y.

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PERKSHIRE, Chester White, Jersey Red and Poland China PIGS, Jersey, Guernsey and Holstein Cattle, Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue.
W. H. SMITH, Cochranville, Chester Co., Penna.
13D26 Mention the American Bee Journal.

Write to Wm. H. Bright—

For prices on all Improved Bee-Fixtures—Hives, Sections, Comb Foundation, Brood-Frames,

Extractors, etc.,

At Bottom Prices.

Golden Italian Queens \$1.00 each, Free Price-List.

Wm. H. Bright, Mazepa, Minn.
19Dtf Please mention the Bee Journal.

and let her run in. That is all the trouble I have with the first swarm.

If I want to double them up, I cut out all queen-cells of a hive whose colony has swarmed, then I proceed in the same way as I did at first; but they will fight. So I wet a cloth in water and pour on a few drops of carbolic acid, and push it up in one corner of the entrance, and they will quit fighting.

I sometimes have two or three swarms in the air at once, but I cage each queen and put her where I want her to go, and in a short time each will hive itself. All I have to do is to wait until they go in, so I can have their queen. I have tried this for five or six years, and never have any trouble.

I never have but 26 colonies when fall comes. I always cut out all queen-cells of each colony the eighth day. I have never lost one swarm since. I have been in the bee-business 12 years. I am 58 years old, and I always take care of the bees. I have 22 colonies. I don't know of more than one dozen colonies in 15 miles besides mine. All have starved to death. I bought 600 pounds of sugar in the last year for my bees. I have never lost but two colonies in the cave in the 12 years. I tier them up in the cave with all the covers off, with a cloth over them. I put away 20 colonies last year, and took out 19. I had 6 swarms this month. **MARY W. LOWN,**
Coin, Iowa, May 28.

Bees in Pretty Good Condition.

I have 48 colonies of bees in pretty good condition. I lost 8 through the winter and spring. I have had only one swarm so far. **N. SANDERS,**

Greensboro, Ind., June 7.

Having a Protracted Drouth.

We are having a protracted drouth—no rain to speak of this spring. The white clover and pastures are drying up for want of rain. **ALVE WORTMAN,**
Monticello, Ind., June 3.

Outlook Not Bright.

Last year's drouth killed all the white clover except a very little along the wet ground, consequently we have nothing to depend upon except the linden, which kept our bees from starvation last year, and perhaps it may again, but the outlook is not bright. **O. B. BARROWS,**
Marshalltown, Iowa, June 7.

A Good Deal of Hard Luck.

We commenced bee-keeping five years ago with 20 colonies, or rather six years ago with one, which we found on a sumac bush while raspberrying in Wisconsin one day. My husband got it into a cracker-box, tied my shawl around it, and carried it home in his lap while I drove the team. We have now about 60 colonies, which wintered splendidly, but they do not pay as well as they might if they had more care, for we rent a large farm and keep only one hired man.

I have been an invalid for the past five years, confined to my bed nearly all the

COMB FOUNDATION.

Wholesale and Retail.

Quality always the best. Price always lowest. **Working Wax into Foundation** by the lb. a Specialty. I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

TAKE NOTICE!

BEFORE placing your orders for SUPPLIES, write for prices on 1-Piece Bass wood Sections, Bee-Hives, Shipping-Crates Frames, Foundation, Smokers, etc.

PAGE & LYON MFG. CO.

NEW LONDON, WIS.

Mention the American Bee Journal.

Control Your Swarms, Requeen, Etc.

Send 25c. for samples of West's Patent Spiral Wire Queen-Cell Protectors, and Patent Spiral Queen Hatching and Introducing Cage; & best Bee-Escape, with circular explaining. 12 Cell-protectors, 60c.; 100, \$3. 12 cages, \$1; 100, \$5, by mail. Circular free. Address, **N. D. WEST, Middleburgh, Schoharie Co., N. Y.** Sold also by all leading supply-dealers. 22A5



Mention the American Bee Journal.

Golden Italian Queens.

One Untested Queen before June 1st....	\$1.00
Six " " " " " " " "	5.00
One " " " after " " " "	.75
Six " " " " " " " "	4.20
One Tested " " before " " " "	1.50
Six " " " " " " " "	7.50
One " " " after " " " "	1.00
Six " " " " " " " "	5.00

One Selected Tested for breeding, \$3.00.

Price-List Free.

W. H. WHITE,
22A5t DEPORT, Lamar Co., TEX.
Mention the American Bee Journal.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
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Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

KANSAS CITY, MO., June 3.—We quote: No. 1 white comb honey, 1-lbs., 13@14c.; No. 2, 11@12c.; No. 1 amber, 10c.; No. 2, 8c. Extracted, white, 7c.; amber, 6c.; dark, 5c. Beeswax, 22c. C. C. C. & Co.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5@7c. All good grades of beeswax, 30c. R. A. B. & Co.

CINCINNATI, O., June 8.—Demand is slow for comb honey at 12@18c. for best white. There is a fair demand for extracted honey at 4@7c. Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., May 18.—Comb honey is in poor demand. Large stores are now waiting for the new crop. Extracted is in fair demand. Beeswax has declined some, but good sales keep market from being overstocked. We quote: Comb honey, 9c. Extracted, 4@6c. Beeswax, 29@30c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6½c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.

While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

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120 & 122 West Broadway.
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I. J. STRINGHAM, 105 Park Place.

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time until the past year I have been gaining slowly. We seem to have had rather more than our share of hard luck during that time. My husband had his hand badly torn to pieces in a circular saw; the barn burned with 150 tons of hay, etc., and altogether it has been pretty hard to make both ends meet, and sometimes they did not quite meet. But I am getting better, and we are hoping for better times. I hived two swarms of bees while my husband was away lately. We enjoy reading the American Bee Journal very much indeed.

MRS. J. H. WHITCOMB.

Wacouta, Minn., June 6.

Labrador Tea—The Kingbird.

I send a branch from a plant that grows in this country. I wish to know its name, and whether it will furnish any honey for the bees.

We have here a brown bird with a small top-knot that watches for and catches the bees. It does not eat them, but pinches the honey out of them. Do you think they will do any harm?

MRS. MATE WILLIAMS.

Nimrod, Minn., May 20.

[Prof. Burrill replies to the foregoing as follows:—EDITOR.]

The plant is called Labrador Tea (*Ledum latifolium*). It is nearly related to the rhododendrons and azaleas of the eastern portions of our country. I know nothing of its honey-producing qualities.

The bird is probably the kingbird, well known for its habit of killing bees and chasing large birds, like hawks and crows. There is no doubt but that the bird does injure the bee-keeper's business.—T. J. BURRILL.

Wintered First-Rate.

I have 16 colonies of bees in Chautauqua double-walled hives, and they wintered first-rate, only one being lost during the winter. I run for comb honey, only it was so dry that I did not get much surplus last year. The Bee Journal is a welcome visitor. Jamestown, N. Y. EDWIN WARD.

Cold Weather Injured Clover.

My bees came through the winter with a loss of 6 colonies (went into winter weak), leaving 27 that were all right. They built up finely on fruit-bloom, and began swarming. They were booming strong May 1, with clover beginning to bloom, and the bees beginning to pay their respects to it nicely up to May 7, when the cold, frosty weather gave it all a clean "knock out."

W. E. BURNETT.

Harrisburg, Ill., June 3.

False Indigo—Cold Weather.

I send you a sample of flower which was brought to this country by the floods of 1883-84. No one seems to know what it is, and as the bees are working on it now very busily, I thought I would ask you to inform me through the Bee Journal what the flower is. It grows on a bush about 6 feet high, very much like a hazel bush, free from thorns. The leaves resemble black locust a great deal, but I hardly think it is a locust, as there are no thorns.

Bees in this county were doing finely

until this cold spell, which has been very hard on them. P. F. KANZLER.

Rockport, Ind., May 22.

[Prof. Burrill, of the Illinois State University, to whom I forwarded the plant specimen, says this of it:—EDITOR.]

This is False-Indigo (*Amorpha fruticosa*), a shrub of not very uncommon occurrence in our western country. It belongs to the Leguminosae family, hence is related to the locusts and red buds.—T. J. BURRILL.

Northern Illinois Convention.

The spring meeting of the Northern Illinois Bee-Keepers' Association was held at the apiary of H. W. Lee, in Pecatonica, Ill., May 21. There was a good attendance, and a pleasant day was spent in examining Mr. Lee's bees and fixtures, as he is one of the largest apiarists in this part of the State. The winter and spring losses are reported quite heavy by members of the association, and white clover not very plentiful this spring.

As the spring meeting is more of a visiting meeting, to see the methods others use, there were not many questions discussed. Resolutions of respect were passed upon the deaths of Edmund Whittlesey, of Pecatonica, and John Swanzy, of Freeport, who died April 24. B. KENNEDY, Sec.

New Milford, Ill.

Bees Wintered All Right.

I wintered 6 colonies all right, and now have 14. Some of my bees are in box-hives, and swarm as they please. I started in two years ago with one colony of Italian bees that I found on a mesquite bush. I knew nothing whatever about bees at that time, but hope to "get there" all right in time. J. W. KNAPP.

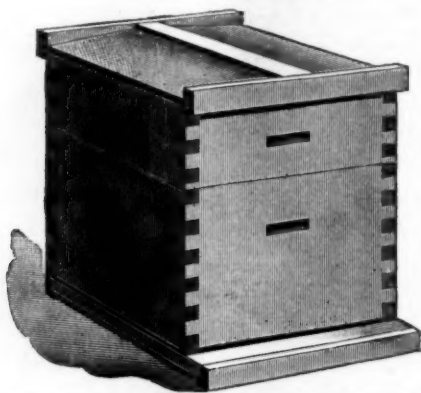
Water Valley, Tex., June 4.

Wintering Bees in Box-Hives, Etc.

I started with a colony of Italians in a hive with movable frames, and bought two old box-hives with fair colonies, from a neighbor who had let the bees "look out for themselves;" these I transferred into 8-frame Simplicity hives on May 7—each box-hive making four good frames of brood and honey, to which I added four full frames of foundation. On May 11 I examined them, removed the fastening strips, and found, to my surprise, that the foundation would average about half drawn out, and from two to four pounds of honey in each new frame. I had about eight pounds of honey from the old hives. The exceeding warm weather of the week, from May 6 to 11, had forced the pear and apple bloom two weeks ahead of its usual time.

I noticed that the combs in the box-hives were rounded at the bottoms, and were at least two inches from the bottom at their nearest point, with imperfect, unused cells four inches from that point. The inference I draw from this is that naturally the bees want an air-space below the brood; hence, would it not be a good plan to place a section-case under the hive for wintering?

I see so many complaints of bees dying during the winter in apiaries conducted with movable-frame hives, while my neigh-



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bor—who has only old box-hives, standing in a most exposed position (one colony in a nail-keg), the bees "looking out for themselves"—loses not one colony.

The article by C. Davenport, on page 309, has, I think, more value for amateur bee-keepers than the cost of three years' subscription to the American Bee Journal.

B. F. ONDERDONK.

Mountain View, N. J., May 18.

[It is an excellent plan to have a space of two inches or more under the frames in winter. A section-case will do well, but of course there must be no sections in it, for they would be rendered unfit for use.

Perhaps the very reason colonies winter better in box-hives is because they are in such hives. The bee-space all around the frames is a nice thing for the convenience of the bee-keeper, but that very space is probably a bad thing for wintering.—Ed.]

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Wm. M. Barnum—The question-box.
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Chas. Dadant & Son—Every part of it.
R. L. Taylor—The query department.
Mrs. J. N. Heater—The whole paper.
Dr. J. P. H. Brown—I read the whole.
C. H. Dibbern—Everything that is new.

W. R. Graham—The Southern Department.

J. M. Hambaugh—This is a stunner. I like it all.

Mrs. L. Harrison—That between the first and last page.

Rev. M. Mahin—I read all departments with interest.

H. D. Cutting—From cover to cover, advertisements and all. It is all interesting.

P. H. Elwood—Anything touching on new methods of management or new implements.

Prof. A. J. Cook—They are all so good that it would be invidious to praise any one specially.

E. France—These questions and answers. I always want to see what the other fellow says.

Eugene Secor—I generally read editorial notes first, but other departments are read with interest.

Dr. C. C. Miller—I don't know. Sometimes the Question-Box, sometimes editorials, sometimes correspondence.

Rev. E. T. Abbott—That depends on what is in them. I read it all, if it is about something that interests me. I have not time to read everything in all the papers.

W. G. Larrabee—Probably the part that comes from nearest my location, or is written by men that I am acquainted with; but I read the editorials about as soon as anything.

Allen Pringle—No special department. As I have not the spare time to read one-fifth of the matter contained in the bee and other journals I get, I go over the contents and simply read that which I may think from the caption to be most interesting.

J. E. Pond—I read the whole with equal interest. I am looking all the time for something new, and each number varies somewhat. One department may be of more interest one week, and another the next, so that really I am unable to say that I read any one special department with more interest than the others.

G. W. Demaree—That is too hard. You might make me *slight* somebody. I do not have time to read everything in the bee-papers like I used to. I am apt to read that which touches on the subjects that may chance to interest me at the time. The "mutual admiration," and the "goody," and the "spiteful fling," I pass by. But I rather like sharp criticism, in good humor.

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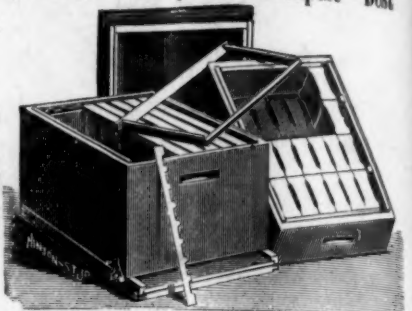
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